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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,254	07/11/2001	David M.H. Stewart	1162-010	1249

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EXAMINER

LEE, EDMUND H

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,254

Applicant(s)

STEWART, DAVID M.H.

Examiner

EDMUND H. LEE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The step of positioning (cl 1, ln 6) is indefinite because its relationship with the step of preparing a bonding surface is unclear. If the non-polar material positioned in the mold is the same as the non-polar material prepared by plasma bonding then it should be positively recited as such.

Clarification and/or correction is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakata et al (USPN 5804299) in view of Hauser et al (USPN 4155972). In regard to claim 1, Nakata et al teach the claimed process including a method of making a polyurethane composite material (col 2, lns 46-60; col 3, lns 53-57; col 3, ln 65-col 4, ln 7; col 4, lns 45-60; col 5, lns 19-24 and 53-57; and col 6, lns 63-65); forming a non-polar material into a predetermined shape (col 2, lns 46-60; col 3, lns 53-57; col 3, ln 65-col 4, ln 7; col 4, lns 45-60; col 5, lns 19-24 and 53-57; and col 6, lns 63-65)--as a note, the silicone rubber constitutes a non-polar material; preparing a bonding surface of the non-

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polar material by plasma treating the bonding surface (col 2, Ins 46-60; col 3, Ins 53-57; col 3, In 65-col 4, In 7; col 4, Ins 45-60; col 5, Ins 19-24 and 53-57; and col 6, Ins 63-65); disposing liquid precursors of polyurethane such that the liquid precursor of polyurethane is in contact with the bonding surface of the non-polar material (col 2, Ins 46-60; col 3, Ins 53-57; col 3, In 65-col 4, In 7; col 4, Ins 45-60; col 5, Ins 19-24 and 53-57; and col 6, Ins 63-65); and curing the liquid precursor of polyurethane to form a polyurethane material, wherein the non-polar material and the polyurethane are effectively joined at the bonding surface of the non-polar material to form the polyurethane composite material (col 2, Ins 46-60; col 3, Ins 53-57; col 3, In 65-col 4, In 7; col 4, Ins 45-60; col 5, Ins 19-24 and 53-57; and col 6, Ins 63-65). However, Nakata et al do not teach positioning the non-polar material in a mold and disposing the liquid precursors of polyurethane into a cavity of the mold. Hauser et al teach molding a button having multiple coatings wherein each coating is molded within a cavity of a mold (col 2, Ins 58-68). Nakata et al and Hauser et al are combinable because they are analogous with respect to molding a multi-layered button. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to mold the polyurethane coating of Nakata et al within a cavity of a mold as taught by Hauser et al in order to improve efficiency and precision. In regard to claims 2-4, Nakata et al teach the specifics of the plasma treatments as found in claims 2 and 3 (col 3, In 65-col 4, Ins 60). However, Nakata et al do not teach using ultra high molecular weight polyethylene. The specific material used is a mere obvious matter of choice dependent on the desired final product and of little patentable consequences to the claimed process since it is not

a manipulative feature or step of the claimed process. Further, UHMW polyethylene is well-known in the molding art for its durability. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use UHMW polyethylene in the process of Nakata et al in order to improve the durability of the button of Nakata et al.

4. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakata et al (USPN 5804299) in view of Hauser et al (USPN 4155972) as applied to claim 1 above and further in view of Kimura (USPN 6322875). The above combined teachings of Nakata et al and Hauser et al are incorporated hereinafter. Nakata et al teach the specifics of the plasma treatments as found in claims 2 and 3 (col 3, ln 65-col 4, lns 60). However, Nakata et al do not teach disposing a metallic material in a predetermined position in the mold; and using ultra high molecular weight polyethylene. In regard to disposing a metallic material in a predetermined position in the mold, Kimura teach a button having inorganic membrane 5/metallic material below outer coating 6 (col 43, lns 12-16 and 33-35). Nakata et al (modified) and Kimura are combinable because they are analogous with respect to buttons. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dispose an inorganic membrane/metallic material under the polyurethane outer coating of Nakata et al prior to the step of disposing the liquid precursors of polyurethane of Nakata et al in order to enhance the aesthetic appeal of the button of Nakata et al. In regard to using ultra high molecular weight polyethylene, the specific material used is a mere obvious matter of choice dependent on the desired final product and of little

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patentable consequences to the claimed process since it is not a manipulative feature or step of the claimed process. Further, UHMW polyethylene is well-known in the molding art for its durability. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use UHMW polyethylene in the process of Nakata et al (modified) in order to improve the durability of the button of Nakata et al (modified).

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shiho et al (USPN 4440820) teach molding a button wherein an outer coating is injection molded within a cavity of a mold.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571.272.1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EHL

EDMUND H. LEE
Primary Examiner
Art Unit 1732



2/9/04